

Case 295. 29-year-old field technician died due to contact to an energized seal tight conduit and attached load breakable disconnect plug.

A 29-year-old male field technician died due to contact to an energized seal tight conduit and attached load breakable disconnect plug. The decedent was one of a five-person crew to set up a custom built machine with multiple units that the decedent's company had manufactured for a client. The decedent and his coworker were assigned to set up the cyclone unit. During set-up, power to the cyclone was turned off. Suspended approximately 12 feet above the floor was a flexible 480-volt power supply seal tight conduit and plug end cord to the cyclone motor. The decedent used a forklift to remove a 150 pound, 14-foot-long, 7-inch diameter product transfer tube which was located above the power supply. The product transfer tube fell from the forks and landed on the power supply seal tight conduit and plug end cabling, stretching it taut. His coworker was getting ready to run a test and so turned power on to the machine. One of the machine components was not functional. He asked the decedent to check on this situation. He then heard the decedent scream. It appears the decedent contacted the power seal tight conduit and plug end cord with his right hand. His coworker found the decedent lying on the floor underneath the electrical power seal tight conduit and plug end cord. After the incident, it was found that in the male plug end, all four connectors were pulled from their set-screw terminals. There was evidence of two phase conductors cross-phasing. There was no sign of arcing between the third phase and the grounding conductors. It appears that the conductors were removed from the plug due to being stretched by the fallen product transfer tube, which caused a short and energized the power seal tight conduit and plug end cord. When the decedent contacted the cord, he became a path to ground and was electrocuted. Emergency response was summoned, and the decedent transported to a local hospital where he was declared deceased.

MIOSHA General Industry Safety and Health Division issued the following Serious citations at the conclusion of its investigation.

SERIOUS: POWERED INDUSTRIAL TRUCKS, PART 21:

- **RULE 2179:**

A powered industrial truck operator shall report all accidents involving injury to an employee, or damage to buildings and equipment to the employer.

Employee did not inform employer of the accident involving a powered industrial truck which had dropped the product transfer damaging tube and flexible conduit.

- **RULE 2193(e):**

An operator shall: Lift or transport only a load that cannot fall out of a basket or container, or off the load engaging means during the normal movements of the truck.

Transfer tube was not secured from falling, rolling, or moving while on the forks of the powered industrial truck.

SERIOUS: DESIGN SAFETY STANDARDS FOR ELECTRICAL SYSTEMS, PART 39, RULE 1910.303(g)(2)(ii):

In locations where electric equipment was likely to be exposed to physical damage, enclosures or guards were not so arranged and of such strength as to prevent such damage:

Employee had removed the product transfer tube located above the seal tight conduit, did not guard the conduit from being struck.